

Equipment Manufacturer's View

The CEO Council (CEOs from Motorola, Intel, IBM, HP, Dell, etc.) has called on the U.S. government to find more spectrum for use as new applications emerge.

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Industry in General

Industry is reporting that voice revenue growth has stalled and is questioning if there will be sufficient backhaul spectrum and cost-effective products to introduce new data services.

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Solving the need and Necessity **through** **Innovation**

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A Favorable Ruling would be
Consistent with the Goals of
Congress and the Commission

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WSI's Request is Supportive

- ❖ The FCC has consistently promoted the national policy set forth in Section 257 of the Communications Act by enabling industry operators and equipment providers to maximize the efficient use of spectrum and facilitate innovative services and product offerings.

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WSI's Request is Supportive

- ❖ The FCC's Best Practices for National Spectrum Management promotes innovation and the introduction of new applications and technologies.
- ❖ The FCC's Spectrum Policy Task Force Report supports enabling the use of spectrum across various dimensions (frequency, time, space), promoting the efficient use of spectrum, and providing for continued technology advancement.

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Topic

Other

❖ Applications

❖ The Evidence Shows:

- ❖ No Technology Risk
 - ❖ Distance of DREs from the antenna is within the minimum coordination contour
 - ❖ Dramatic Increase in the Effective Use of Spectrum
 - ❖ Regulations and Market Forces Dictate that the Transmit Power will be the Minimum Necessary to Carry Out the Communications Desired
-

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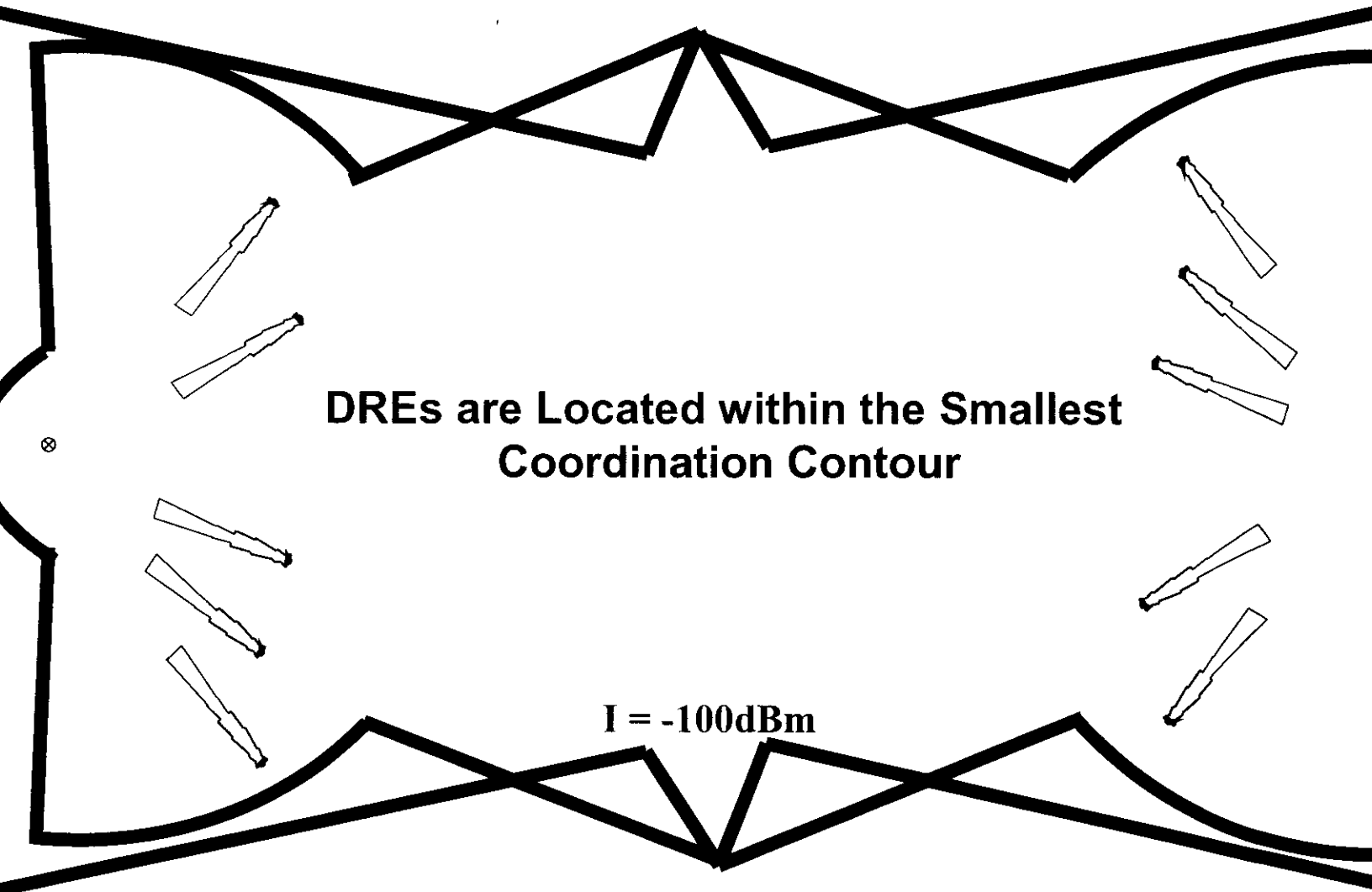
No Technology Risk

- ❖ **Antennas with Multiple Radiators have been used by the US Military in Mission Critical Situations for over three decades**
- ❖ **In 1997 the FCC Ruled in favor of Antennas with Multiple Radiating Elements.***
 - ❖ **Will maximize spectrum efficiency and minimize interference**
 - ❖ **Will provide licensees with additional flexibility to use directional antennas employing emerging technologies**

* Final Report and Order FCC 97-1 (ET Docket No. 96-35)

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DRE Location

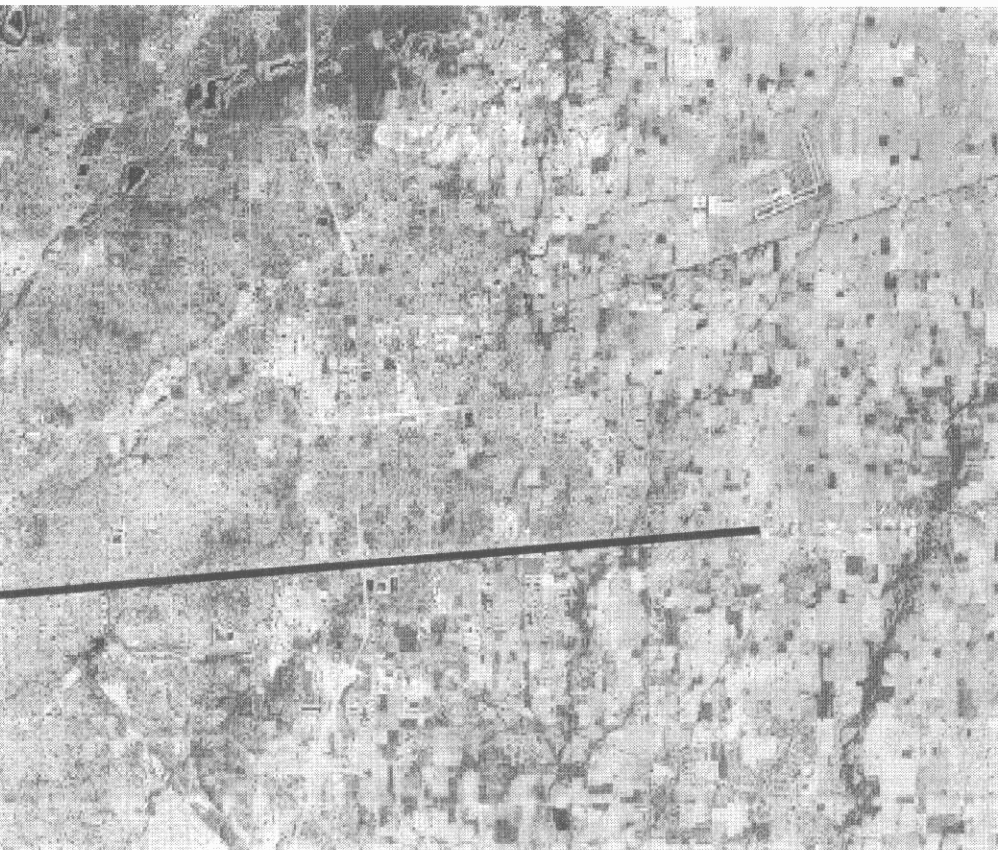


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Increase in the Effective Use of Spectrum

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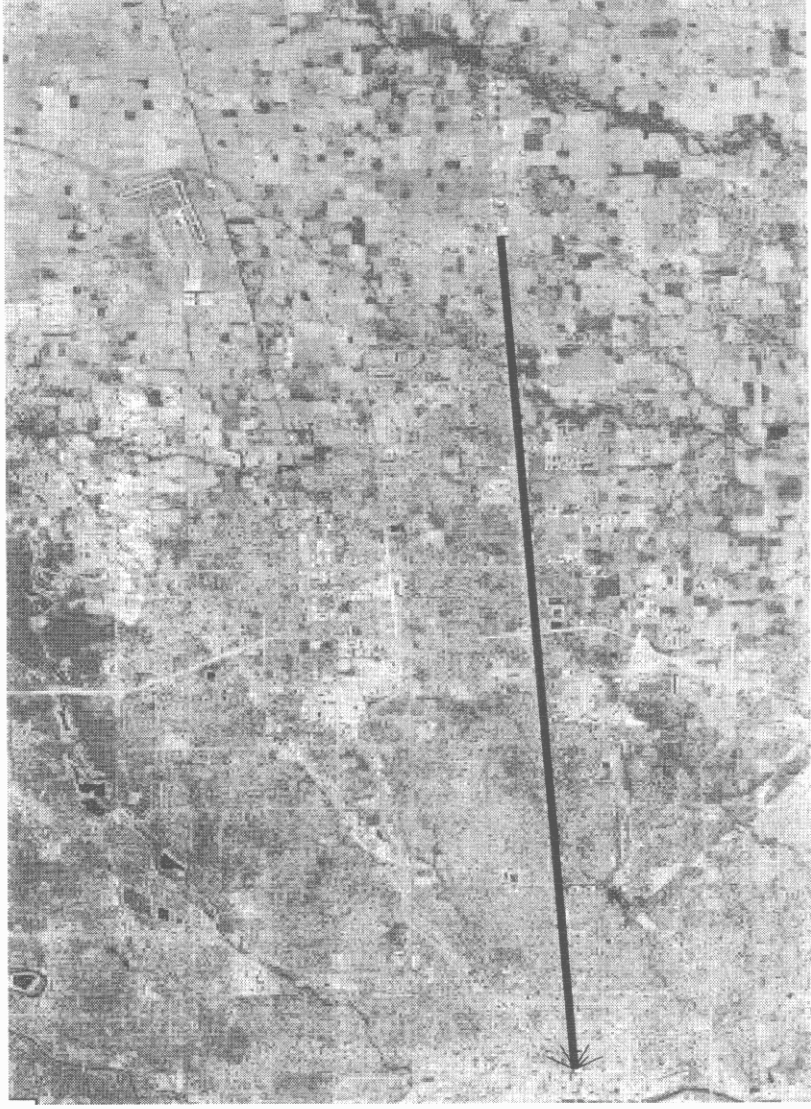
Legacy Example (6GHz)



- One Freq Pair
- One Path
- Reqd Capacity 134M
- Min Reqd Load 67M
- One Major Subscriber
- Operating Load 89M
- Mo Rev. \$6,000
- Mo PBT \$600

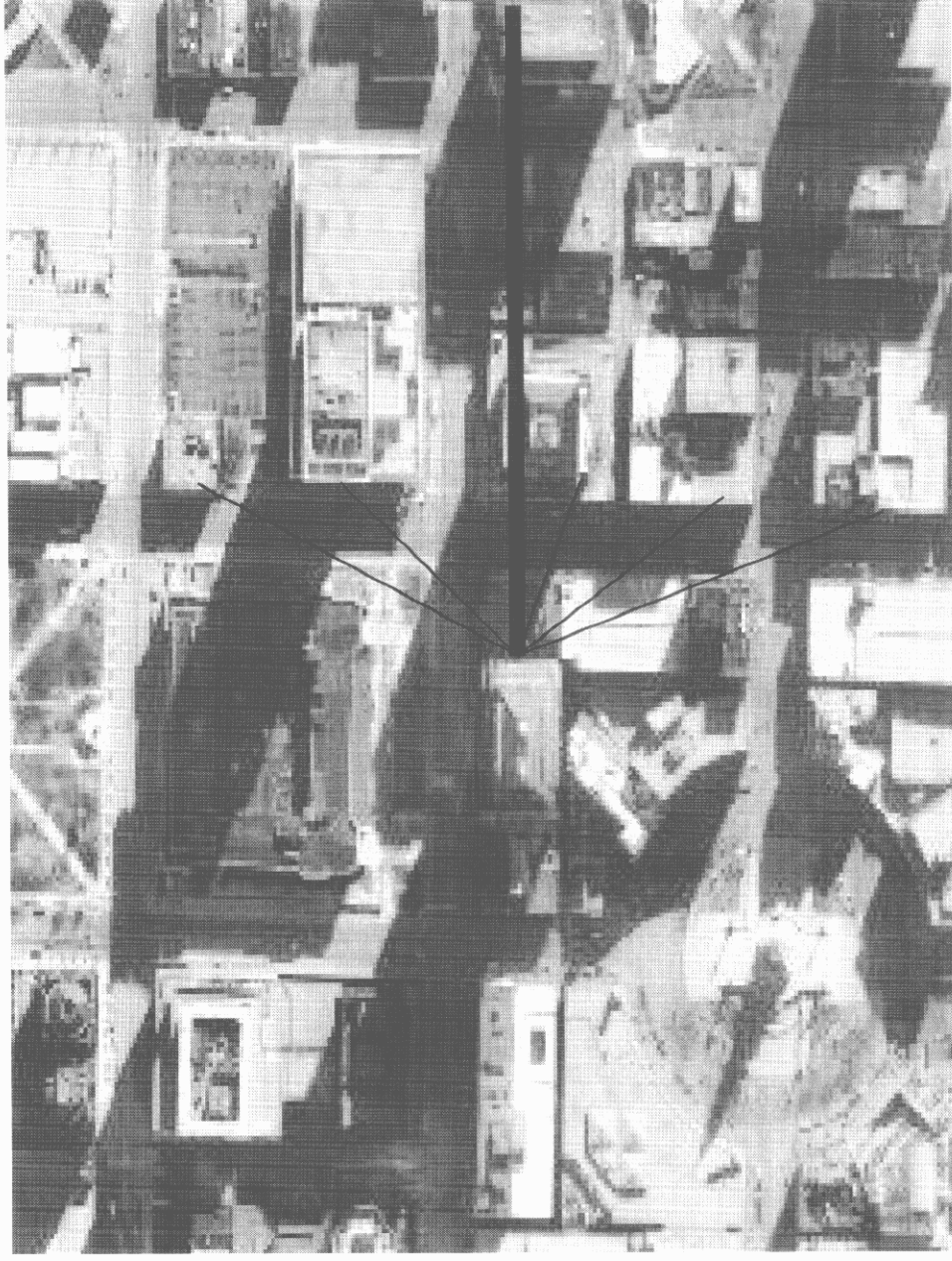
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Concurrently Coordinated Example (6GHz)



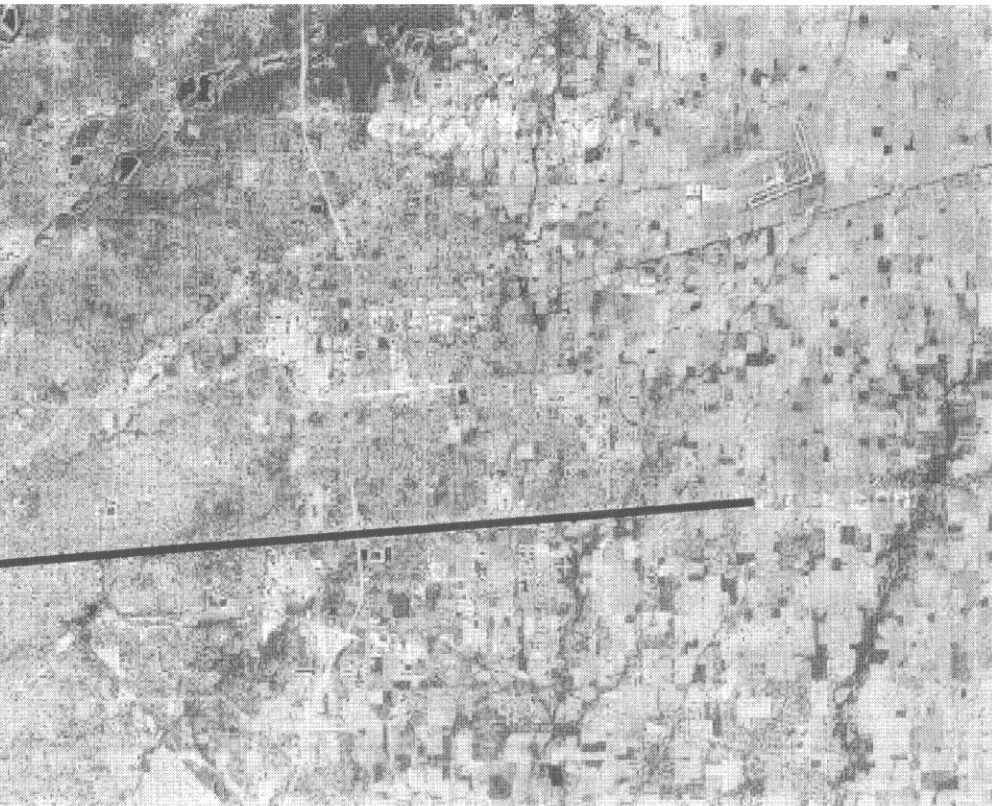
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Concurrently Coordinated



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Concurrently Coordinated Example (6GHz)



- One Freq Pair
- Six paths
- Reqd Capacity 134Mbps
- Min Reqd Load 67Mbps
- One Major Subscriber
- Five Minor Subscribers
- Actual Load 134Mbps
- Mo Rev. \$14,400
- Mo PBT \$8,600


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Compelling Business Case

Legacy

- One Freq Pair
- One Path
- One Major Subscriber
- No Minor Subscribers
- Traffic Load 89Mbps
- Mo Rev. \$6,000
- Mo PBT \$600

**How do
We
Get from
Here to There?
Thru
Innovation**



Concurrent Coordination

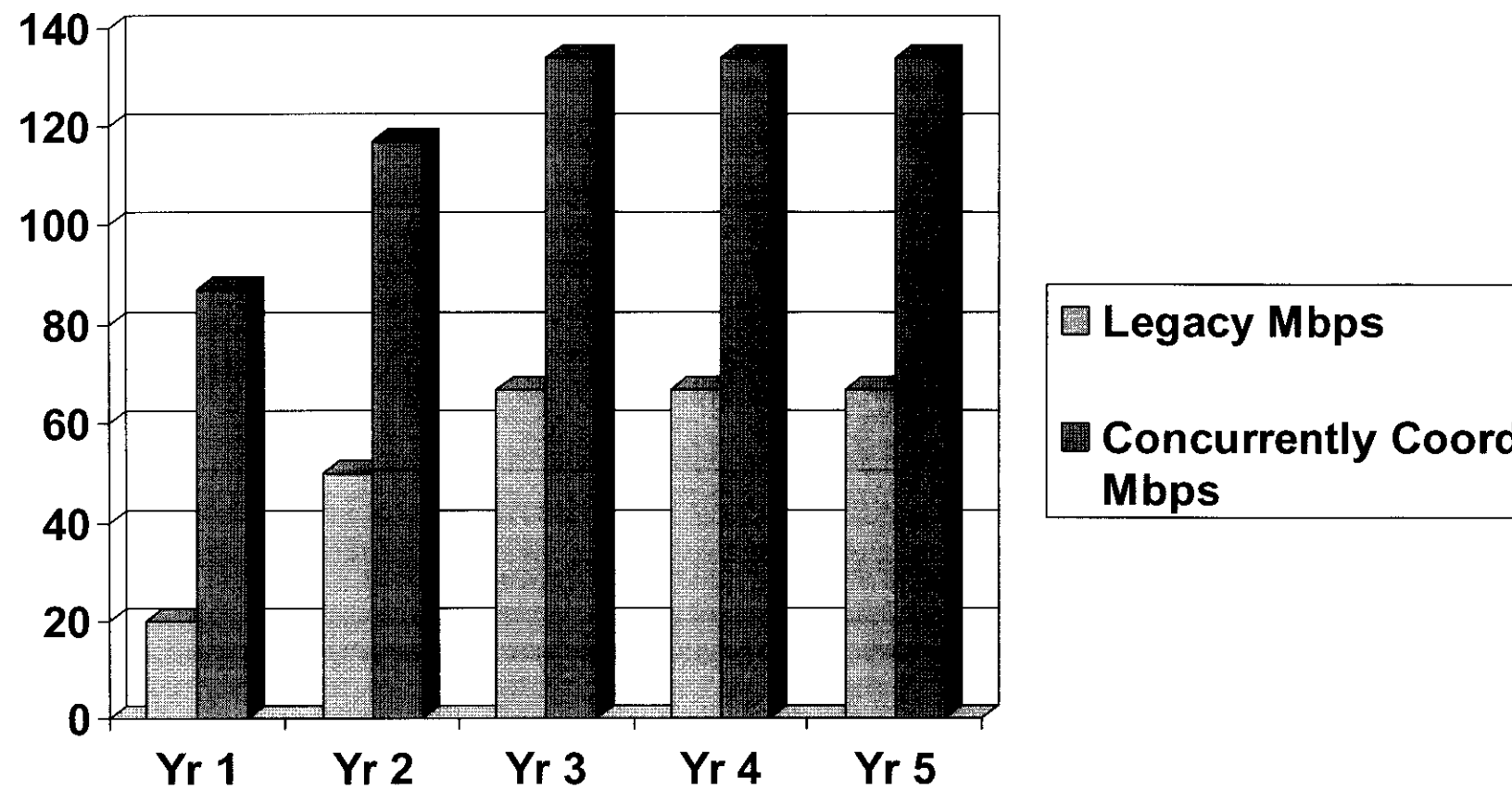
- One Freq Pair
- Six Paths
- One Major Subscriber
- Five Minor Subscribers
- Traffic Load 134Mbps
- Mo Rev. \$14,400
- Mo PBT \$8,600

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Innovation

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Optimized Use of Spectrum



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Choice of EIRP

❖ Rule 101.113

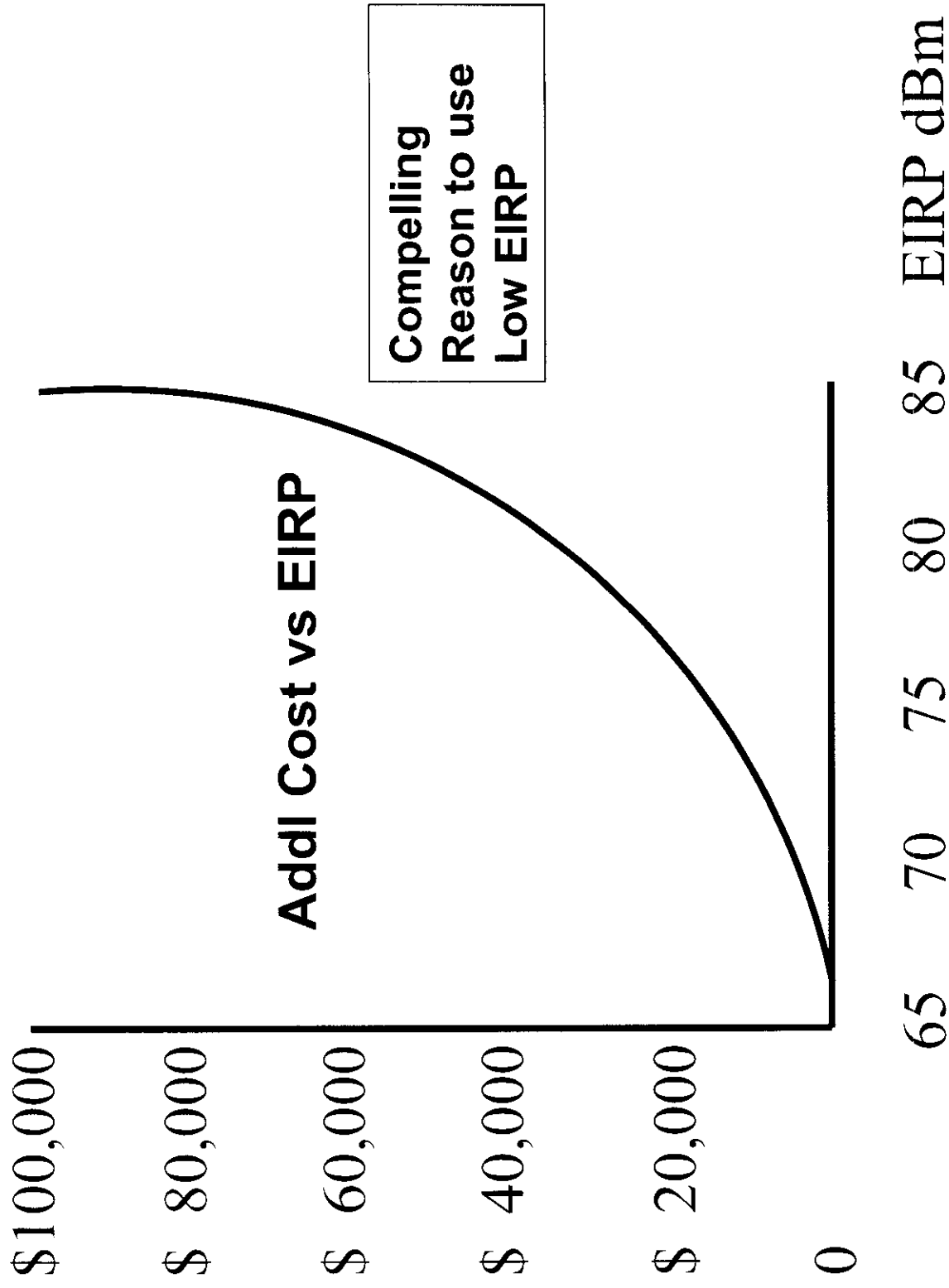
The average power delivered to the antenna must be the Minimum Necessary to Carry Out the Communications Desired

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Choice of EIRP

The Lowest EIRP results in the Lowest Cost

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Choice of EIRP

Advances in technology since 2006 make it possible for the EIRP to be reduced by over 25dB to a level below 95% of the average EIRP of legacy paths

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Summary

WTB Docket No 07-121

The Evidence Shows:

- ✓ A Declaratory Ruling is the correct vehicle for removing uncertainty
- ✓ Public Notice Comments and Reply Comments have Produced Evidence to Remove Uncertainties
- ✓ Rule 101 of the FCC's Rules does Protect Fixed Service Licensees From Harmful Interference and also Promotes the Effective use of Spectrum
- ✓ WSI's Request meets a Public need and Necessity for the more Effective Use of a Finite National Resource (Spectrum) Under the Existing Part 101 of the Rules

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Summary

WSI's Requests

- Fixed Service licensee is permitted to simultaneously coordinate multiple links whose transmitter elements collectively comply with the Commission's antennas standards and frequency coordination procedures

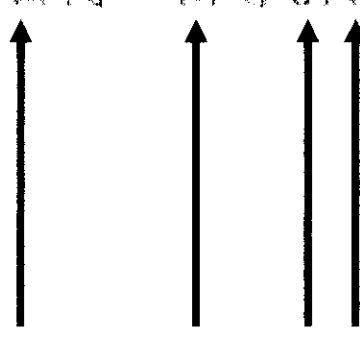
The Evidence Shows

- The evidence shows that the spectrum to support multiple links is concurrently coordinated
- That DREs of smart antennas comply with the FCC's antenna standards and frequency coordination procedures

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WSI's Request Supports the Goals of the Commission

Goals (WTB's Web Site)

- 
1. Foster competition among different services.
 2. Promote universal service, public safety, and service to individuals with disabilities.
 3. Maximize efficient use of spectrum.
 4. Develop a framework for analyzing market conditions for wireless services.
 5. Minimize regulation where appropriate.
 6. Facilitate innovative service and product offerings, particularly by small businesses and new entrants.
 7. Serve WTB customers efficiently (including improving licensing, eliminating backlogs, disseminating information and making staff accessible).
 8. Enhance consumer outreach and protection; improve enforcement process.

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“Go off and do something wonderful”

—Robert Noyce

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